



County of Los Angeles CHIEF EXECUTIVE OFFICE

Kenneth Hahn Hall of Administration
500 West Temple Street, Room 713, Los Angeles, California 90012
(213) 974-1101
<http://ceo.lacounty.gov>

WILLIAM T FUJIOKA
Chief Executive Officer

Board of Supervisors
GLORIA MOLINA
First District

MARK RIDLEY-THOMAS
Second District

ZEV YAROSLAVSKY
Third District

DON KNABE
Fourth District

MICHAEL D. ANTONOVICH
Fifth District

March 31, 2010

To: Supervisor Gloria Molina, Chair
Supervisor Mark Ridley-Thomas
Supervisor Zev Yaroslavsky
Supervisor Don Knabe
Supervisor Michael D. Antonovich

From: William T Fujioka
Chief Executive Officer

A handwritten signature in black ink, appearing to read "W. T. Fujioka", is written over the printed name and title.

TRANSMISSION OF THE CHIEF EXECUTIVE OFFICE'S COST AVOIDANCE ANALYSIS OF THE LONG BEACH HOMELESS VETERANS INITIATIVE

In response to your Board's motion in May 2008, directing the CEO to work with the City of Long Beach to assess the service cost offsets associated with investment in the Long Beach Homeless Veterans Initiative, attached is the "Cost Avoidance Yielded through Participation in the Long Beach Homeless Veterans Initiative" report. The City of Long Beach has been under contract with the County for the Initiative since July 21, 2008. The Initiative is paid for with funds in the amount of \$500,000 per year over three years. The Initiative seeks to house homeless veterans in the City of Long Beach and to provide case management support aimed at directing these veterans to needed services, benefits, and supportive programs, including assistance for those who are permanently disabled in applying for Supplemental Security Income, as well as assistance for those who are able to work in finding employment.

Investment in the Initiative as a Successful Cost Avoidance Strategy

The report was completed by the CEO's Research and Evaluation Services (RES) unit. The findings show that investment in the Initiative has been a successful cost avoidance strategy for the County of Los Angeles. Client engagement with the Initiative between January 2008 and June 2009 was associated with significant service cost offsets for the County Departments of Health Services (DHS), Public Health (DPH), Public Social Services (DPSS), and the Sheriff. In fact, *RES' analysis suggests that the Initiative offset is \$1.4 million worth of County services – which is equal to 93 percent of the County's three-year budget for the Initiative – after only one year of client engagement.*

"To Enrich Lives Through Effective And Caring Service"

*Please Conserve Paper – This Document and Copies are Two-Sided
Intra-County Correspondence Sent Electronically Only*

Key Findings

In order to determine the extent to which investment in the Initiative has yielded cost avoidance for Los Angeles County, RES used data matching techniques to link client records from the Initiative to records of services clients received through DHS, Department of Mental Health (DMH), DPH, DPSS, and the Sheriff. This made it possible to compare the costs incurred in providing clients with services one year prior to and one year after their engagement with the Initiative. The analysis yielded the following key findings:

- The costs that DPH incurred in providing substance abuse services to the Initiative client population dropped by more than 83 percent after clients engaged with the Initiative, from \$120,000 during the year before engagement to \$20,000 during the year after engagement.
- The costs that DHS incurred in providing services to the Initiative client population dropped from \$257,000 for the year prior to client engagement with the Initiative to \$60,000 during the year after client engagement with the Initiative, a decline of 77 percent.
- Costs related to incarceration were higher among Initiative clients than any of the other service cost areas considered in this report. Incarceration costs also showed the largest decrease, from \$1.5 million over the year prior to client engagement with the Initiative to \$290,000 over the year after client engagement, a decline of 81 percent.
- An analysis of administrative records suggests that Initiative clients, who are on General Relief (GR) at the time of their participation in the Initiative are expected to leave GR six months earlier than would be the case if they did not participate in the Initiative. When this estimate is multiplied by the monthly GR grant and Food Stamp amounts for these veterans - \$207 and \$137 respectively – the cost avoidance for the six-month period is \$2,064 per person, which yields a total GR cost avoidance for the Initiative client population of \$154,800.
- The comparison between the Initiative and the comparison group suggests that the Initiative offsets 93 percent of the three-year budget it receives from the County of Los Angeles after just one year.

Each Supervisor
March 31, 2010
Page 3

The Net Value of the County's Investment in the Initiative will Increase in Years Two and Three

RES' report on the Initiative only presents results for one year. However, insofar as the Initiative's one-year cost offsets are almost equal to the County's three-year budget for the Initiative, subsequent offsets in years two and three will almost certainly boost the net value of the County's investment. The report therefore indicates that investment in the Initiative has been a highly cost effective venture and an important undertaking given the importance of maximizing scarce dollars in the current fiscal environment.

If you have any questions, please contact me or your staff may contact Kathy House, Acting Deputy Chief Executive Officer at (213) 974-4530, or via e-mail at khhouse@ceo.lacounty.gov.

WTF:KH
LB:MM:am

Attachment

c: Executive Office, Board of Supervisors
County Counsel
Sheriff
Health Services
Mental Health
Public Health
Public Social Services

County of Los Angeles
Chief Executive Office
Service Integration Branch



**Cost Avoidance Yielded Through Participation In
The Long Beach Homeless Veterans Initiative**

Research and Evaluation Services

Max Stevens
Halil Toros
Manuel H. Moreno
Duc Doan
Nancy Salem

Submitted to:

County of Los Angeles, Board of Supervisors

March 2010

**County of Los Angeles
Chief Executive Office
Service Integration Branch**

Board of Supervisors

**Gloria Molina
Chair
First District**

**Mark Ridley-Thomas
Supervisor
Second District**



**Zev Yaroslavsky
Supervisor
Third District**

**Don Knabe
Supervisor
Fourth District**

**Michael D. Antonovich
Supervisor
Fifth District**

**William T Fujioka
Chief Executive Officer**

**Kathy House, Interim Deputy Chief Executive Officer
Lesley Blacher, Interim Senior Manager
Manuel H. Moreno, Research Director**

Acknowledgements

We would like to thank the following organizations and people for providing critical information about the Long Beach Homeless Veterans Initiative, and for offering invaluable feedback on the work that went into this report:

City of Long Beach

Susan Price
Patricia LaPlace
Rene Miyasato

United States Veterans Initiative

Greg McCormack

Single Parents United 'N' Kids

Susan Speir

Mental Health America of Los Angeles

Lesley Braden

Los Angeles County, Chief Executive Office

Michael Castillo
Adrineh Melkonian

University of Pennsylvania

Dr. Dennis Culhane

Key Findings Presented in this Report

The Long Beach Homeless Veterans Initiative (LBHVI) is a program associated with Los Angeles County's Homeless Prevention Initiative (HPI). The City of Long Beach has been under contract with the County for the LBHVI since July 2008. This LBHVI is paid for with funds in the amount of \$1.5 million over three years. The Initiative seeks to house homeless veterans in the City of Long Beach, and to provide case management support aimed at directing these veterans to needed services, benefits, and supportive programs, including assistance for those who are permanently disabled in applying for Supplemental Security Income (SSI), as well as assistance for those who are able to work in finding employment.

The Research and Evaluation Services (RES) unit within Los Angeles County's Chief Executive Office (CEO) conducted the present cost avoidance study of the LBHVI in order to comply with a motion the Board of Supervisors passed in May of 2008 directing the Chief Executive Officer to work with the City of Long Beach to assess the service cost offsets associated with investment in the LBHVI. The key findings presented in this report include the following:

- The costs that the Department of Public Health (DPH) incurred in providing substance abuse services to the LBHVI client population dropped by more than 83 percent after the clients engaged with the Initiative, from \$120,000 during the year before engagement to \$20,000 during the year after engagement.
- The costs that the Department of Health Services (DHS) incurred in providing services to the LBHVI client population dropped from \$257,000 for the year prior to client engagement with the Initiative to \$60,000 during the year after client engagement with the Initiative, a decline of 77 percent.
- Costs related to incarceration were higher among LBHVI clients than any of the other service cost areas considered in this report. Incarceration costs also showed the largest decrease, from \$1.5 million over the year prior to client engagement with the Initiative to \$290,000 over the year after client engagement, a decline of 81 percent.
- The costs that the Department of Mental Health (DMH) incurred in providing services to the LBHVI client population increased by close to one third after clients engaged with the Initiative, from \$303,000 for the year prior to client engagement to almost \$440,000 for the year after engagement.
- The linkage that RES made between administrative records for the LBHVI and the Department of Public Social Services' (DPSS) General Relief (GR) program suggests that 40 percent of the Initiative clients observed for this report received GR at some point during the period in which clients were observed.

- An analysis of administrative records suggests that LBHVI clients who are on GR at the time of their engagement with the Initiative are expected to leave GR six months earlier than would be the case if they did not engage with the Initiative. When this estimate is multiplied by the monthly GR grant and food stamp amounts for these veterans - \$207 and \$137 respectively – the cost avoidance for the six-month period is \$2,064 per person, which yields a total GR cost avoidance for the LBHVI client population of \$154,800.
- The net total service cost avoidance – inclusive of the costs that DHS, DMH, DPH, DPSS, and the Sheriff's incur in providing services to the LBHVI client population – is \$1.6 million for the year after client engagement in the Initiative. A comparison between the Initiative's client population and a comparison group of similar homeless veterans who did not engage with the Initiative suggests that the bulk of this total cost avoidance is attributable to client engagement with the LBHVI.
- The comparison between the LBHVI client population and the comparison group suggests that the Initiative offsets 93 percent of the three-year budget it receives from the County of Los Angeles after just one year.

TABLE OF CONTENTS

I.	Introduction	1
	Investment in the Long Beach Homeless Veterans Initiative as a Cost Avoidance Strategy.....	1
	The Initiative's Program, Key Personnel and their Functions	2
II.	Sources and Methods.....	3
	Client Costs Before and After Engagement with the Initiative.....	3
	Data Matching Across Multiple County Departments.....	4
	Using Limited Data to Project Findings for the Whole Client Group.....	4
	Using a Comparison Group to Bolster the Reliability of the Cost Avoidance Analysis.....	4
	Administrative Data.....	5
III.	Veteran Engagement with the Initiative	6
IV.	Utilization of County Services and Costs Before and After Engagement the Initiative.....	8
	Public Health.....	8
	Health Services.....	8
	Mental Health.....	9
	Sheriff's.....	9
	Total Service Costs for the Long Beach Homeless Veterans Initiative Clients, not Including Public Social Services	10
	Average Costs per Client, Before and After Engagement.....	10
V.	General Relief Receipt and Employment Before and After Engagement with the Initiative.....	11
	General Relief Receipt among the Long Beach Homeless Veterans Initiative Clients	11
	General Relief Cost Avoidance.....	11
	Employment among Long Beach Homeless Veterans Initiative Clients.....	12
VI.	Cost Trends: Long Beach Homeless Veterans Initiative Clients versus a Comparison Group	12
	The Composition of the Comparison Group.....	12

Comparing Cost Avoidance	13
Health Services.....	13
Public Health.....	13
Sheriff's.....	13
Mental Health.....	13
Total Cost Avoidance Yielded from the Long Beach Homeless Veterans Initiative	14
VII. Conclusions	14

Table 1. Number of Services Received by the Long Beach Homeless Veterans Initiative Clients	7
Table 2. Net Service Cost for the Long Beach Homeless Veterans Initiative Clients.....	13
Figure 1. Clients Served by the Long Beach Homelessness Veterans Initiative by Date of Program Entry	6
Figure 2. Services Offered to Clients by the Long Beach Homeless Veterans Initiative	8
Figure 3. Cost of services by Type of Service Before and After Program Engagement	9
Figure 4. Average Cost of Services by Type of Services Before and After Program Engagement.....	10
Figure 5. Total Annual Cost Avoidance by Service Type	15

I. Introduction

The Long Beach Homeless Veterans Initiative (LBHVI), a program associated with Los Angeles County's Homeless Prevention Initiative (HPI), has been under contract with the County since July 21, 2008, and is paid for with funds in the amount of \$500,000 per year over three years.¹ The Initiative seeks to house homeless veterans in the City of Long Beach, and to provide case management support aimed at directing these veterans to needed services, benefits, and supportive programs, including assistance for those who are permanently disabled in applying for Supplemental Security Income (SSI), as well as assistance for those who are able to work in finding employment.

The Research and Evaluation Services (RES) unit within Los Angeles County's Chief Executive Office (CEO) conducted the present cost avoidance study of the LBHVI in order to comply with a motion the Board of Supervisors passed in May of 2008 directing the Chief Executive Officer to work with the City of Long Beach to assess the service cost offsets associated with investment in the LBHVI.

Investment in the Long Beach Homeless Veterans Initiative as a Cost Avoidance Strategy

RES recently released a report showing that public investment in the provision of housing for homeless General Relief (GR) recipients, as well as in services and SSI supports for this population, generates positive employment and housing outcomes for the recipients and yields millions of dollars in annual service-cost offsets that can be reinvested in homeless programs.² The findings given in RES' GR Housing Subsidy report are consistent with a growing body of literature suggesting that well-designed programs for urban homeless populations – especially programs simultaneously providing for housing and facilitated access to needed services – tend to help municipalities, counties and states avoid the considerably larger costs that typically result from allowing individuals to remain on the streets, where they inevitably develop increasingly acute needs that tax public resources more heavily in the long run.³

The main purpose of the present report is to show the extent to which investment in the LBHVI similarly yields service cost avoidance for the County of Los Angeles. However, it should be emphasized that the size of the Initiative's client population is dwarfed by the number of recipients currently on the County's GR program, which is projected to reach 100,000 before the end of 2010. Nevertheless, this report presents findings suggesting that investment in the LBHVI has, up to now, been a successful cost avoidance strategy for the County. Client engagement with the initiative during the study period for this report was associated with significant cost avoidance for the County departments of Health Services (DHS), Public Health (DPH), Public Social Services (DPSS), and the Sheriff's.⁴

The Initiative's Program, Key Personnel and Their Functions

Under the LBHVI, the City of Long Beach provides case management services, housing support, outreach, health and mental health services, and substance abuse treatment for homeless veterans in the Long Beach area. Special services are also provided to assist permanently disabled veterans in eliminating child support obligations owed to the County of Los Angeles.

The Department of Health and Human Services (City of Long Beach) administers the LBHVI with the help of subcontractors from the United States Veterans Initiative (US Vets), Mental Health America of Los Angeles, and Single Parents United 'N' Kids (SPUNK).

A Veterans Specific Case Manager, who is an employee of the City of Long Beach, is responsible for verifying the veteran status of clients with the Veterans Administration (VA). The Case Manager handles an annual caseload of fifty homeless veterans, providing assistance to clients with access to wrap-around services in the areas of mental and physical health, including substance abuse. The Case Manager also facilitates access to housing resources and employment opportunities. At least three-quarters of the Initiative's clients are placed in housing, and each client is assisted for between six months and one year.

A Mental Health Coordinator, who is also a full-time employee of the City of Long Beach, is the city's liaison to Mental Health America of Los Angeles and the County Department of Mental Health (DMH). The Mental Health Coordinator also writes and obtains grants to secure future funding for the Initiative, writes educational material offering information on services available to homeless veterans, plans activities in collaboration with DMH, takes the lead on projects designed to improve access to mental health services for homeless veterans, and develops plans to address gaps in mental health services.

The City of Long Beach also employs a Veterans Specific Outreach Worker for the LBHVI. The Outreach Worker recruits homeless veterans for the program from the streets and works with the Case Manager to direct the veterans to needed services. The Case Manager and Outreach Worker also jointly help clients complete the documentation required for the receipt of public services, and they work to provide clients with basic necessities such as hygiene kits, meal vouchers, and clothing for job interviews.

A Second Outreach Worker, along with a Clerk, both of whom are subcontracted through US Vets, complement the efforts of the Veterans Specific Outreach Worker employed directly through the City of Long Beach. The subcontracted Outreach Worker conducts outreach to homeless veterans returning from service to local military bases in the County of Los Angeles. More specifically, this Outreach Worker, with assistance from the Clerk, is tasked with referring the returning veterans to emergency, transitional and permanent supportive housing and support services for homeless veterans.

Additionally, these workers refer homeless veterans to the Veteran Affairs for medical and rehabilitative services, make referrals to additional health and mental health services, provide information on services available through US Vets, and assist with the completion of paperwork for public benefits.

The LBHVI also subcontracts with SPUNK for a Program Coordinator whose function is to assist permanently disabled veterans in eliminating child support debts owed the County. The Initiative additionally subcontracts with Mental Health America of Los Angeles' Homeless Assistance Program (HAP) for a Nurse Practitioner, who conducts clinical assessments for the purpose of gaining specific information among homeless veterans identified as having acute mental health needs by the Outreach Workers, the Case Manager, or Providers within the Long Beach Continuum of Care System.⁵ Along with the clinical assessment, the Nurse Practitioner provides consultation for the veterans and communicates with other members of the Mental Health America of Los Angeles HAP staff regarding referrals and service needs.

II. Sources and Methods

Client Costs Before and After Engagement with the Initiative

In order to determine the degree to which investment in the LBHVI has yielded service cost avoidance for Los Angeles County, it was necessary to compare the service costs incurred by County departments in serving LBHVI clients during one year prior to their engagement with the Initiative against the costs incurred in serving these clients during the year after engagement. This report deployed a before-after cost avoidance analysis, specifically looking at the costs incurred by five key County departments in providing services to LBHVI clients. The five departments were DHS, DMH, DPH, DPSS and the Sheriff's. This approach made it possible to observe both total before and after service costs for the LBHVI client population – which were determined by looking at the total outlays of all five departments combined – as well as the before and after costs incurred by specific departments.

If average and total costs of County service utilization decline significantly for homeless veterans after engagement with the LBHVI, and if the County's investment in the Initiative does not equal or exceed the service costs that would be incurred if the Initiative were not implemented, then the conclusion to be drawn is that investment in the Initiative yields cost avoidance. The pre and post-program analysis conducted for this report looks at the period during one year prior to client engagement with the LBHVI and one year after engagement. However, the average post-engagement period for the Initiative's clients is ten months since the data collection covered the time through the end of 2009. The cost avoidance analysis deployed here, moreover, is enhanced with an examination of whether employment among clients increases after engagement with the Initiative.

Data Matching Across Multiple County Departments

An assessment of the cost effectiveness of the LBHVI presupposes the ability to gauge the service utilization histories of the Initiative's clients across the five departments considered in this report. In addition, it is necessary to know the costs the departments incur in providing these services to clients. Each department keeps client service utilization records in departmental administrative data. RES used data matching techniques to link client records from the LBHVI to the records of services and benefits they received through DHS, DMH, DPH, DPSS, and the Sheriff's. These matching techniques, which were originally deployed for RES' Adult Linkages Project (ALP), make it possible to remove personal identifiers from administrative data and link service records across agencies on the basis of encrypted Statistical Linkage Keys (SLKs). The process of de-identifying records and linking them via SLKs is critical since it enables data to be integrated across multiple departments by means that remain in conformity with privacy and confidentiality laws.⁶

Using ALP data integration and data matching and integration techniques, RES created a multi-departmental profile of the services used by the homeless veterans engaging with the LBHVI during the study period, as well as of the costs incurred by each department in providing the services.⁷ Additionally, RES linked LBHVI administrative records to employment records kept with the State Employment Development Department (EDD) in order to view employment patterns for the veterans before and after engagement with the LBHVI.

Using Limited Data to Project Findings for the Whole Client Group

The itinerant and frequently unstable characteristics of homeless individuals make the maintenance of complete and up-to-date data on homeless populations a difficult task. Not surprisingly, there are significant gaps and omissions in the administrative records for the LBHVI. As a result, only 106 clients - 19 percent of the veterans observed in this report - had sufficient data in their Initiative records to make linkages to County service records possible.⁸ For this reason, this report multiplies the overall cost figures extracted from the linked records by a factor of five. This methodological strategy effectively projects the available data on costs to the entire veteran population observed in the analysis.

Using a Comparison Group to Bolster the Reliability of the Cost Avoidance Analysis

Insofar as the clients analyzed in this report may have experienced a decline in the use of County services over the period from before to after their engagement with the Initiative (a phenomenon known as 'regression to the mean'), one way to bolster the reliability of a cost avoidance analysis of the LBHVI is to construct a comparison group that enables cost trends for the Initiative's client population to be compared with trends for a similar group of people who did not receive service through the Initiative. To the extent that service cost declines are observed for the client population after

engagement with the Initiative, a comparison group provides a sense of the changes in service utilization that can be attributed to this client engagement. The cost avoidance findings presented in RES' analysis are therefore measured against cost trends for a comparison group, the composition of which will be described in the course of the comparative analysis.

Administrative Data

The data used for this report come from the following sets of administrative records:

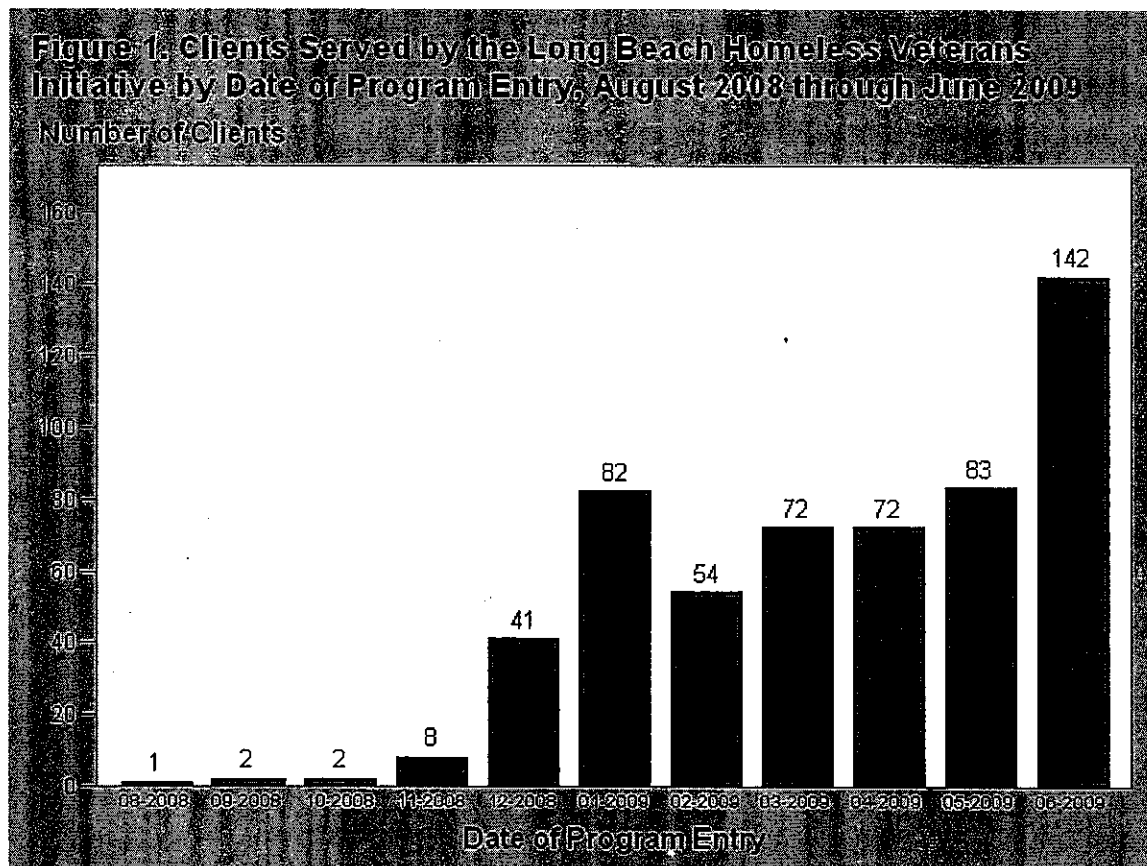
- Administrative records from the LBHVI are the primary data source used for this report. These records include service utilization information and personal identifiers for all 559 of the clients observed for the analysis.
- Records of GR receipt are provided by DPSS' Los Angeles Eligibility, Automated Determination, Evaluation and Reporting system.
- Employment data is extracted from records kept by the California Department of Social Services (CDSS), using the Unemployment Insurance Program database made available through EDD employment data fields.
- The DHS client database provides departmental records of inpatient and outpatient treatments, emergency stays in County hospitals and health facilities, and the costs of providing treatments.
- The DPH Alcohol and Drug Program Administration client database provides records of outpatient counseling, daycare, detoxification, residential services provided in contracted facilities, and the costs of providing the various modalities of treatment.
- The DMH client database provides records of inpatient and outpatient treatments in County mental health centers, as well as the costs of providing services.
- The Sheriff's database provides records of jail stays and medical services provided to Initiative clients in custody, as well as the costs of incarceration and medical treatment.

RES' ALP database was used to select a representative sample of veterans for the purposes of constructing a comparison group. This database includes a multi-departmental profile of service utilization and service costs for recipients on GR between 2005 and 2008.

III. Veteran Engagement with the Initiative

This report looks at 559 veterans who engaged with the LBHVI between January 2008 and June 2009.⁹

Figure 1 illustrates the distribution of clients by their service start dates. There are only a few clients who were served before November 2008.



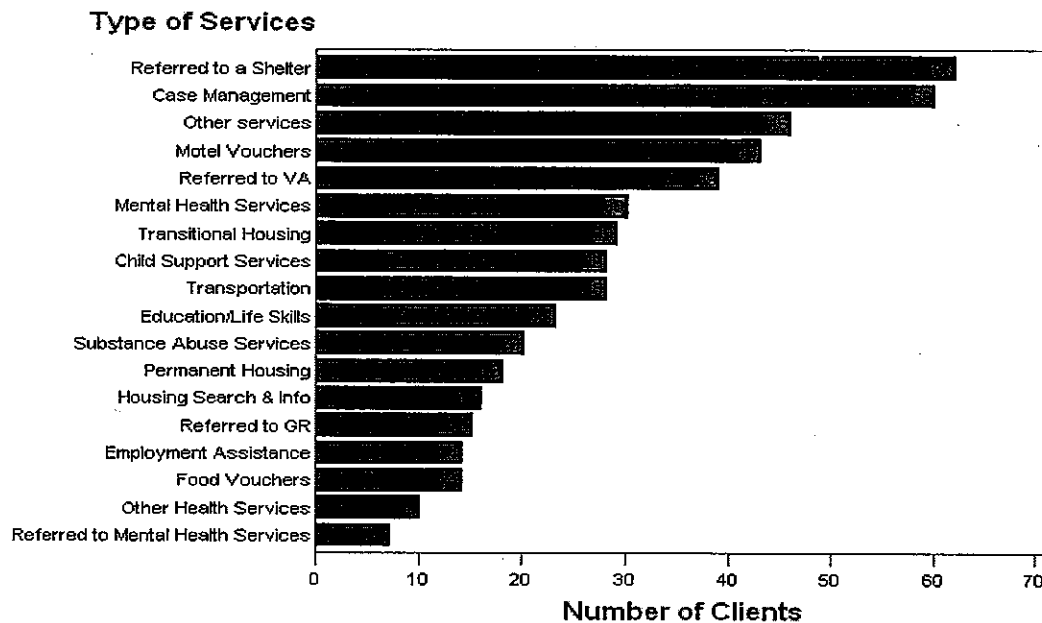
Out of 559 observed LBHVI clients, 304 received outreach only.¹⁰ Among the remaining 255 clients, 162 (almost two-thirds) received one service through the Initiative in addition to outreach. Table 1 shows the distribution of the number of services by LBHVI clients.

Table 1. Number of Services by LBHVI Clients

Total Number of Services	Number of Clients	Percent
Outreach Only	304	N/A
1	162	63.53
2	48	18.82
3	17	6.67
4	10	3.92
5	5	1.96
6	1	0.39
7	1	0.39
8	1	0.39
9	1	0.39
10	1	0.39
11	8	3.14
Total	255	100.00

Figure 2 shows the types of services offered through the LBHVI and the number of clients who used each one of these services during the observation period.¹¹ While 62 clients were referred to a homeless shelter, another 60 received case management services. The category 'Other Services', which were used by 60 clients, includes the provision of Home Investment Partnerships Program (HOME) Funds information, birth certificate retrieval, and driver license reinstatement. Another 43 clients received motel vouchers, 29 were placed in transitional housing 18 were placed in permanent housing, 30 received mental health services, and 20 received substance abuse services. In addition, the child support payments of 28 clients were reduced or eliminated, 39 clients were referred to the VA, and 15 were referred to the County's GR program.¹²

Figure 2. Services Offered to Clients by the Long Beach Homeless Veterans Initiative



IV. Utilization of County Services and Costs Before and After Engagement with the Initiative

Figure 3 compares the total costs County departments incurred, by service type, in providing services to LBHVI clients during the one year prior to their Initiative engagement with the costs incurred over one year after their engagement.

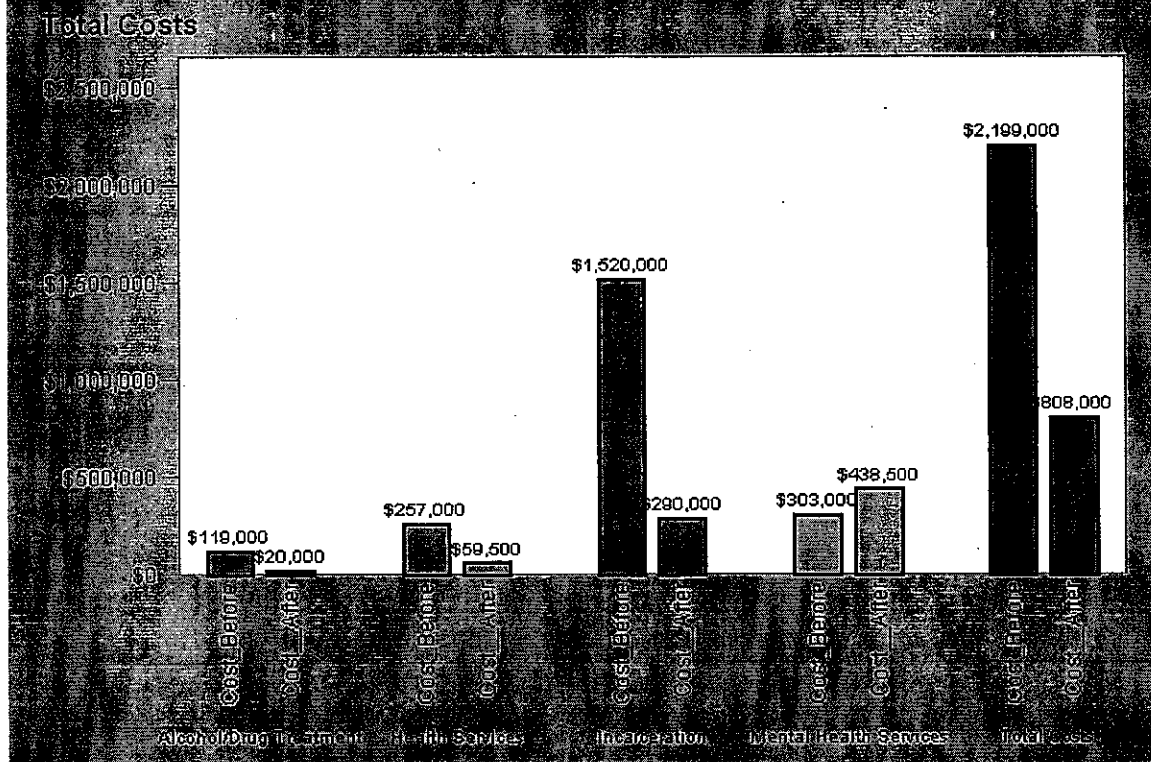
Public Health

Half of the services provided to LBHVI clients through DPH's alcohol and drug abuse treatment programs over the study period were for detoxification, while the other half were residential treatments. The DPH figures show that costs dropped by more than 83 percent, from \$120,000 before engagement with the Initiative to \$20,000 after.

Health Services

The services provided through DHS to Initiative clients were equally divided over the study period between emergency and outpatient services. Only one veteran stayed in a hospital during the year prior to engagement with the initiative and none stayed during the year after. DHS costs showed a significant decrease, from \$257,000 during the year before engagement with the Initiative to \$60,000 during the year after, a decline of 77 percent.

Figure 3. Cost of Services by Type of Service Before and After Program Engagement



Mental Health

While the DMH services provided to the LBHVI clients were split fairly evenly before engagement with the Initiative between day treatment and outpatient services, close to 70 percent of the services DMH provided were outpatient services after engagement. Unlike the pre-post results for DHS and DPH, DMH costs increased by close to one third during the year after engagement with the Initiative, from \$303,000 to almost \$440,000. However, this increase can be viewed as a beneficial effect of engagement with the LBHVI since part of the intent of the Initiative is to improve client access to appropriate services, as well as to reduce client use of inappropriate acute care services.

Sheriff's

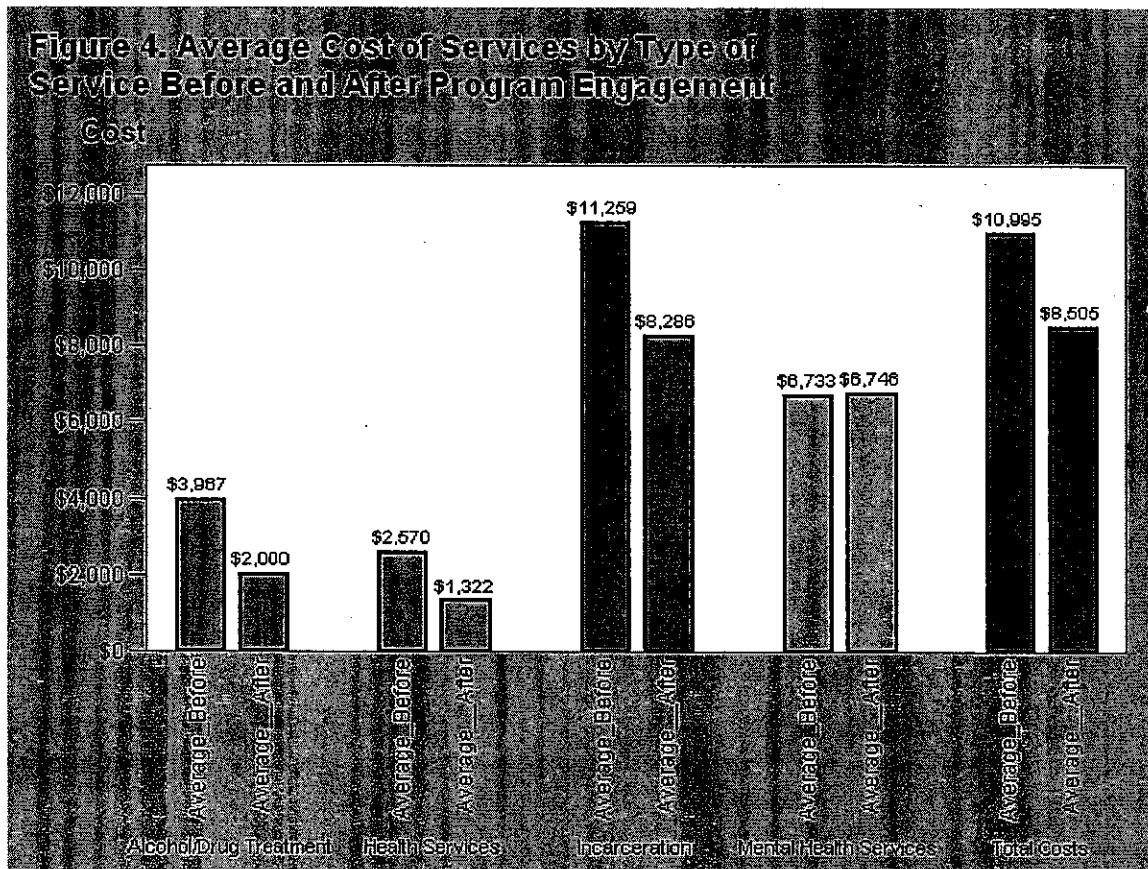
Costs related to incarceration were higher among LBHVI clients than any of the other service cost areas considered in this report.¹³ At the same time, incarceration costs showed the largest decrease, from \$1.5 million over the year prior to engagement with the Initiative to \$290,000 over the year after engagement, a decline of 81 percent.¹⁴

Total Service Costs for the LBHVI Clients, Not Including Public Social Services

Figure 3 indicates that total County service costs for LBHVI (not including costs incurred by DPSS, which will be discussed below) declined by 70 percent, from \$2.2 million during the year prior to engagement with the Initiative to \$808,000 during the year after engagement. The bulk of the cost declines can be attributed to reduced jail costs. Of the four County departments considered so far, only DMH experienced an increase in the costs they incurred after the veterans engaged with the Initiative. In providing services to these veterans, DHS, DMH, DPH, and the Sheriff's, taken together, saw their costs drop by a total of almost \$1.4 million, which is only \$100,000 less than the total three-year budget the County has allocated for the Initiative.

Average Costs per Client, Before and After Engagement

Figure 4 illustrates the before-after change in average County service costs per LBHVI client. While mental health costs remained flat at an average of \$6,700 per client, average service costs per client decreased during the year after engagement with the Initiative for DHS, DPH, and the Sheriff's. Average DPH costs (alcohol and drug treatment) and DHS costs per client were each halved during the year after engagement with the Initiative, from \$4,000 to \$2,000 and \$2,600 to \$1,300 respectively. Average jail costs per client incurred by the Sheriff's declined from \$11,300 prior to engagement with the Initiative to \$8,300 after engagement.



Average total County service costs per client decreased by 23 percent from \$11,000 over the year prior to engagement with the Initiative to \$8,500 over the year after engagement. Average costs declined less than total costs because the total number of LBHVI clients who received service from at least one of the four departments considered so far also decreased from 200 to 95 over the period during which clients were observed. Almost half of those who received services during the year prior to engagement with the Initiative did not receive any services after they left the Initiative. While the number of clients incarcerated declined by four times after they left the program, clients who received mental health services increased by 50 percent. In an overall sense, Figure 3 and Figure 4 together suggest that, not only do aggregate costs decline for the LBHVI client population after engagement with the Initiative, but the reason for this decline is that fewer veterans use inappropriate services after engagement, and the clients who use services in the post-engagement period tend to do so with considerably less intensity.

V. GR Receipt and Employment Before and After Engagement with the Initiative

GR Receipt among LBHVI Clients

The linkage RES made between administrative records for the LBHVI and DPSS' GR program revealed that 40 percent of the Initiative clients with records sufficiently complete to make inter-departmental data linkages received GR at some point during the period in which clients were observed. More than half of these recipients (23 of the 43 veterans linked to the GR database) were on GR while they engaged with the Initiative – 15 of these recipients left GR after their start date, while the remaining eight stayed on GR through December 2009. At the same time, 20 clients linked to the DPSS database received GR pre or post but not during their engagement with the Initiative. Half of these veterans were on GR beforehand and did not return to GR after engagement, while the other half returned to or entered GR after engagement. The 23 clients who were on GR during their engagement with the Initiative had longer periods of receipt before this engagement than they did afterwards. More specifically, the average number of months these clients were on GR dropped by six months, from 10.5 to 4.5 months, since two-thirds of them left GR after their engagement with the Initiative was complete and did not return over the period they were observed.

GR Cost Avoidance

These findings form the basis for an estimate that, on average, Initiative clients who are in receipt of GR aid at the time of their engagement with the Initiative are expected to leave GR six months earlier than would be the case if they did not engage with the Initiative. When this estimate is multiplied by the monthly GR grant and food stamp amounts for these veterans - \$207 and \$137 respectively – the cost avoidance for the six month period is \$2,064 per person.

The GR cost avoidance per person can be used to project an overall cost avoidance figure for the observed client population as a whole by first multiplying by a factor of five the 15 veterans who were observed to have left GR after their engagement with the program.¹⁵ The second step is to multiply the six month cost avoidance per person (\$2,064) by the projected number of persons leaving GR six months earlier than would otherwise be the case (75), which yields a total GR cost avoidance over the study period of \$154,800.

Employment among LBHVI Clients

RES was able to link 20 percent of clients with sufficient LBHVI administrative data to State EDD records (21 of 107 clients were matched). However, only three of these clients found a job after engaging with the Initiative. The exceedingly small sample size makes it impossible to estimate any cost avoidance in connection with employment findings. Almost all of the matched clients show a terminated employment and subsequent spell of homelessness prior to engagement with the Initiative.

The Initiative provided employment services to 14 clients over the study period, only one of which found a job after receiving this support. However, since employment data is currently not available beyond the second quarter of 2009, the analysis conducted here undoubtedly underestimates employment outcomes.¹⁶ Employment outcomes would improve with more quarters of observation

VI. Cost Trends: LBHVI Clients versus a Comparison Group

The Composition of the Comparison Group

RES constructed a comparison group of homeless veterans from the ALP database. This database includes over 13,000 persons who entered the County's GR program in early 2006 and stayed in the program for multiple months. A sample of 86 homeless veterans with similar background and demographic characteristics to the LBHVI client population was composed and the service utilization frequencies and costs between 2007 and 2008 were calculated for this group and compared against service cost changes for LBHVI clients over the period between one year prior to and one year after engagement with the Initiative.¹⁷ If the cost avoidance for the LBHVI client population is significantly greater than cost avoidance for the ALP comparison group, which never received service through the Initiative, the difference can be attributed to veteran engagement with the Initiative.

Comparing Cost Avoidance

Table 2 summarizes the differences observed in comparing the net cost avoidance yielded by the LBHVI and the ALP comparison group.

Table 2. Net Service Cost Changes for LBHVI Clients

Services	Program Group % Change	Comparison Group % Change	Net % Change	Estimated Cost Difference
Alcohol & Drug Health	-83.2%	-16.2%	-67.0%	-\$79,300
Mental Health	+44.7%	N/A	+44.7%	+\$135,500
Incarceration	-80.9%	+5.9%	-85.9%	-\$1,320,000
Total Costs				-\$1,417,000

Health Services¹⁸

Health Services costs for the ALP comparison group declined by 17.4 percent between 2007 and 2008, from \$109,800 to \$90,100. However, the 77 percent declines in Health Services costs for the LBHVI client population over the period from one year prior to one year after client engagement with the Initiative were much larger.

Public Health¹⁹

DPH costs for the ALP comparison group declined by 16.2 percent between 2007 and 2008, from \$25,900 to \$21,700. This change is very small in both absolute and proportional terms when compared to the decrease from \$120,000 to \$20,000, a six-fold decline, in drug and alcohol service costs for DPH in serving LBHVI clients over the period from one year prior to one year after engagement with the Initiative.

Sheriff's²⁰

The costs the Sheriff's Department incurred in servicing the ALP comparison group increased by close to six percent between 2007 and 2008, from \$675,000 to \$714,900. By comparison, the Department's costs in servicing the LBHVI client population declined by 81 percent, from \$1.5 million to \$290,000 over the period from one year prior to engagement with the Initiative to one year after engagement.

Mental Health

Only four veterans from the ALP Comparison group could be linked to service records in the DMH database, and therefore a cost avoidance comparison between the ALP group and the LBHVI client population could not be made.

Total Cost Avoidance Yielded from the LBHVI

The numbers provided in Table 2 suggest that the total cost avoidance that can be attributed to the LBHVI over one year is \$1.4 million. Insofar as the County's three-year budget for the LBHVI is \$1.5 million, the comparison between the LBHVI client population and the ALP comparison group re-emphasizes the cost effectiveness of the County's investment in the Initiative.

VII. Conclusions

In conducting the cost avoidance analysis for this report, RES only linked client services across County agencies, and it is likely that some of the veterans considered in this report have also received services from Long Beach-area health facilities, and that some of them stay in Long Beach jails. These city-level costs were not considered here due to data availability issues. Data availability issues created other analytical limitations as well. The small sample size for the LBHVI client population, for example (only 106 out of 565 clients had Initiative records that were complete enough to be linked to County Departments), creates the potential for a higher rate of sampling error. Moreover, there may be other factors contributing to lower service costs after client engagement with the Initiative. A more robust multivariate analysis would be necessary to examine the causal impact of these factors, but such an approach is beyond the scope of this study.

Even with these limitations, however, the analyses presented in this report suggest that investment in the LBHVI has been a successful cost avoidance strategy for the County of Los Angeles. The costs incurred in four of the five County departments observed in this report dropped significantly after clients engaged with the Initiative. As Figure 5 shows, much of the overall cost avoidance was accounted for by the Sheriff's Department, which saw an 81 percent decline in incarceration and medical costs during the year after client engagement with the Initiative. However, substantial cost avoidance was also observed for DHS, DPH and DPSS.

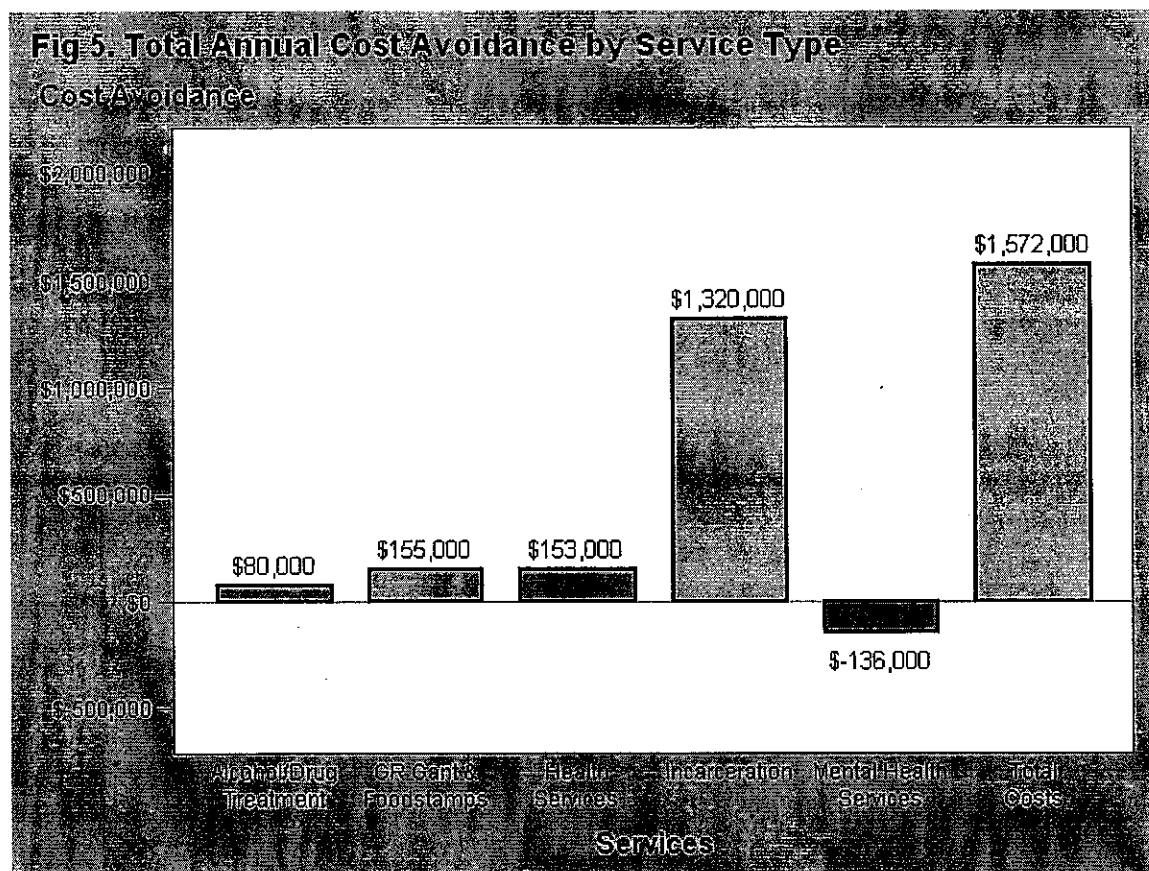


Figure 5 shows that DMH was the only County department observed in this study that saw its costs rise in serving the LBHVI client population after their engagement with the Initiative. It should be noted here that the data indicates that many LBHVI clients received mental health services between two and three years prior to their engagement with the Initiative, but did not receive these services one year prior to engagement. Often these clients began treatment again after engagement, and their re-engagement with mental health services after several years away led to an increase in the costs DMH incurred in providing them with mental health services. Moreover, as noted previously, the increase in utilization of DMH services can be viewed as an appropriate effect of client engagement with the LBHVI since the Initiative is designed to improve access to needed services while at the same time reducing utilization of inappropriate acute care services.

Figure 5 additionally shows that the net cost avoidance associated with veteran participation in the LBHVI is close to \$1.6 million during the year after engagement with the Initiative. RES was able to verify the magnitude of this cost avoidance through the comparison between the LBHVI client population and the ALP comparison group, which suggested that approximately \$1.4 million in cost avoidance can be attributed to client participation in the Initiative. This one-year cost avoidance total is equal 93 percent of the County's three-year budget for the LBHVI. Put more directly, the cost-effectiveness of the Initiative is underscored by this report's finding that the one-year cost offsets for the Initiative are almost equal to the County's total three-year budget for the Initiative.

Subsequent offsets in Years two and three of the County's investment in the Initiative would therefore almost certainly boost the net value of this investment.

Endnotes

¹ The annual \$500,000 come from the County's Fourth District and, in particular, the District's allocation of ongoing Stabilization Center funds connected to the Homeless and Housing Prevention Fund.

² Manuel H. Moreno, Halil Toros and Max Stevens. *The GR Housing Subsidy and Case management Pilot Project: An Evaluation of Participant Outcomes and Cost Savings*. Los Angeles County, CEO, Service Integration Branch (SIB), RES, September 2009.

³ Additional key reports and works in this body of literature include the following: Corporation for Supportive Housing. "The Role of Permanent Supportive Housing in Addressing Family Homelessness." A Policy Brief prepared by the CSH and the National Center on Family Homelessness." December 2006/. Culhane, Dennis P. "The Cost of Homelessness." *European Journal of Homelessness*, 2.1. 2008. 97-114; Culhane, Dennis P. and Stephen Metraux. "Rearranging the Deck Chairs or Reallocating the Lifeboats? Homelessness Assistance and its Alternatives." *Journal of the American Planning Association*. 74.1. 2008. 111-121; Culhane, Dennis P., Stephen Metraux and Trevor Hadley. "Public Service Reductions Associated with Placement of Homeless Persons with Severe Mental Illness in Supportive Housing." *Housing Policy Debates*. 13.1, 2002. 107-163; Gilmer, Todd P, Wilard G. Manning, Susan L. Ettner. "A Cost Analysis of San Diego County's REACH Program for Homeless Persons." *Psychiatric Services*. 60.4. 2009. 445-450; Khadduri, Jill. "Housing Vouchers are Critical for Ending Family Homelessness," Homeless Research Institute. 2008. Martinez, Tia E. and Martha Burt. "Impact of Permanent Supportive Housing on the Use of Acute Care Health Services by Homeless Adults." *Psychiatric Services*. 57.7, 2006, 992-999; Sadowski et al. "Effect of a Housing and Case Management Program on Emergency Department Visits and Hospitalizations Among Chronically Ill Homeless Adults: A Randomized Trial." *Journal of the American Medical Association*. 301.17, 2009. 1771-1778.

⁴ At the same time, the cost avoidance that these departments enjoyed in connection with the LBHVI were tempered somewhat by findings in relation costs for the DMH, which actually increased, and employment outcomes, which did not indicate anything noteworthy, though data issues significantly limited the analysis of these outcomes. Looking at overall County costs, however, program yielded net cost avoidance during the study period for this report.

⁵ The Long Beach Continuum of Care System consists of all Departments of Housing and Urban Development funded agencies, as well as some additional non-funded agencies, taking part in a citywide effort to coordinate homeless service planning.

⁶ Other works using the ALP's data integration and matching techniques are as follows: Culhane, Dennis P and Stephen Metraux. *Using ALP Data for Determining Patterns and Costs of Services Use by GR Recipients in Los Angeles County*. County of Los Angeles, CEO, SIB, RES. July 2009; Manuel H. Moreno, Halil Toros and Max Stevens. *The GR Housing Subsidy and Case management Pilot Project: An Evaluation of Participant Outcomes and Cost Savings*. County of Los Angeles, CEO, SIB, RES, September 2009.

⁷ The match rates against County service records for the LBHVI client population varies by the service and/or department considered. For example, while 30 percent of the Initiative clients observed in this report were in Jail at some point between January 2008 and June 2009, less than ten percent received alcohol and drug treatment through DPH, 22 percent used DHS facilities, and 16 percent received services through DMH.

⁸ In order for an individual LBHVI client record to be linked to administrative records from DHS, DMH, DPH, DPSS, and/or the Sheriff's, the client record must, at minimum have a correct date of birth or social security number. Without either one of these identifiers, the linkage cannot be reliably made.

⁹ Those who began to receive services through the LBHVI after June 2009 were not included in the analysis so that all observed clients could be tracked for at least six months.

¹⁰ Outreach workers employed either directly through the City of Long Beach or via contract with US Vets conduct outreach to homeless veterans on the streets and at military bases. The outreach the veterans receive includes general recruitment into Initiative programs; direction to and assistance with access to health and mental health services, including treatment for substance abuse; assistance with the completion of documentation for public services; provision of basic necessities such as hygiene kits, meal vouchers, and clothing for interviews; referrals to emergency, transitional, and permanent supportive housing and support services; and referral to Veterans Affairs for medical and rehabilitative services.

¹¹ It should be noted here that the clients represented in connection with each service shown in Figure 2 are not mutually exclusive as clients frequently receive more than one type of service.

¹² Table A is the LBHVI status report for Fiscal Year 2008-09, which shows the number of clients entering various programs offered through the Initiative. The numbers given in the status report are different than the numbers provided in Figure 2. Figure 2 relies on raw data collected from the LBHVI's administrative records. Some of these differences are attributable to different labeling of particular kinds of services. The differences are not critical to this study, which focuses on services the LBHVI's client population received through County Departments. Since this study is not an outcome evaluation, RES did not attempt to reconcile the numbers given in Table A with the numbers given in Figure 2.

TABLE 2A

City of Long Beach – Homeless Veterans Initiative Status Report Fiscal Year 2008-09	
Services	Number Entering Program This Fiscal Year
Housing Assistance	
Moving Assistance	4
Emergency Housing	64
Transitional Housing	21
Permanent Housing	6
Rental Subsidy	12
Employment/Education	
Education	10
Job Training	3
Life Skills	13
Benefits	
General Relief and Food Stamps	9
General relief Only	6
SSI/SSDI	6
Veterans	19
Supportive Services	
Case Management	83
Health Care	7
Mental Health/Counseling	28
Substance Abuse	6
Mental Health Coordination	39
Food Vouchers	64
Child Support Elimination/Reduction	28
Transportation	95
Other	26
Outreach Sessions	360

¹³ The high costs related to incarceration are due in large part to the fact that they involve utilization of expensive medical services. It should be noted that while the incarceration costs for the LBHVI client population are high, a comparison between the Initiative clients and a similar group of GR recipients analyzed in the analytical report for RES' ALP indicates that the incarceration costs for the two groups are fairly proportional. In other words, the incarceration costs presented in this report do not appear to be unusually high.

¹⁴ One caveat with respect to this dramatic drop in incarceration costs is that RES identified three LBHVI clients during the study period that stayed in jail extensively and received medical treatment. The pre-post numbers for these clients were excluded from the analysis because they were extreme statistical outliers. Their incarceration costs before engagement with the initiative were almost \$200,000. Upon release from jail, they engaged with the Initiative and received case management services. However, after they left the Initiative they were re-incarcerated, incurring costs over \$500,000, an increase of over 60 percent from the incarceration costs they incurred prior to engagement with the Initiative.

¹⁵ This reflects the data quality issues that only made it possible to obtain reliable records for 20 percent of the veterans who engaged with the program during the study period.

¹⁶ It is for this reason that a majority of the client data was matched against EDD records for the period prior to engagement with the Initiative.

¹⁷ The demographics of the ALP sample are similar to those of the LBHVI client population, but there are a considerably higher proportion of African Americans in the ALP group (70 percent versus 40 percent in the LBHVI client population). The LBHVI client population has a higher proportion of White veterans (40 percent versus 15 percent in the ALP group). The disability rates in the two groups are similar (42 percent in ALP group versus 37 percent in LBHVI client population). The average age for the two groups is also similar (50 for the ALP group versus 48 for the LBHVI client population). Finally both populations are mainly composed of single or separated veterans (70 of the veterans in the ALP group fall into this category versus 75 percent in LBHVI client population).

¹⁸ 25 veterans in the ALP comparison group (29 percent) were linked to service records in the DHS database versus the 22 percent that were linked to DHS service records in the LBHVI client population.

¹⁹ 13 veterans in the ALP comparison group (15 percent) were linked to service records in the DPH database versus the ten percent linked from the LBHVI client population.

²⁰ 41 veterans in the ALP comparison group (47 percent) were linked to administrative records in the Sheriff's database versus the 30 percent of the LBHVI client population linked to Sheriff's records.